

REMARKS

Claims 1-32 and 39-52 are pending in the application. Claims 33-38 have been canceled without prejudice. Claims 1, 13, 16, 17, and 22 have been amended. In independent claims 1 and 17, the word "only" has been added to more distinctly claim "a single I/O line", which at least finds support in Figs. 1, 2, and 5, where the "single conductor or line 201" (see page 5, lines 11-14) is depicted. In claims 13 and 16 the word "number" replaces the word "numbers" for proper antecedent basis, and in claim 22 the word "is" has been added for proper sentence structure. No new matter has been introduced by these amendments. Favorable reconsideration of this application is respectfully requested in light of the above amendments and the following detailed discussion.

Claim Rejections – 35 U.S.C. § 103

The Examiner has rejected claims 1-32 and 39-52 under 35 U.S.C. § 103(a) as being unpatentable over Kniess et al. (U.S. 5,790,526, hereinafter Kniess). The Examiner asserts, as per claims 1-5, 17, 22, and 25-32, that Kniess teaches an adapter circuit (24, 26, 28, or 30) for controlling the direction of data traffic, between a first device (station 10, Fig.1) and a second device (station 12, Fig. 1) over a single I/O line (14) (col. 4, lines 42-47) by utilizing the differences of instantaneous source impedance

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(low or high) of a controlling I/O line during data out and data in modes (Abstract, cols. 2-8).

The applicants, however, have amended independent claims 1 and 17 to more clearly claim "only a single I/O line". After carefully studying the Kniess patent, the applicants can find nowhere in Kniess where Kniess utilizes only a single I/O line. Instead, the applicants find that Kniess utilizes a "two-wire bus 14" (see column 4, line 44) and that Kniess fails to provide any motivation for utilizing only a single I/O line.

In this 35 U.S.C. § 103(a) rejection, the Examiner asserts that the present invention is unpatentable over Kniess alone. The applicants, however, assert that according to the MPEP, "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references, when combined) must teach or suggest all the claim limitations." See MPEP 2143 (emphasis added). Thus, MPEP 2143.03 specifically states that, "to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (emphasis supplied).

Thus, the applicants assert that the Kniess reference fails to teach or suggest all the claim limitations (i.e., utilizing only a single I/O line), and the mere allegation that the

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differences between the claimed subject matter and the prior art are obvious does not support a prima facie case of unpatentability. See *In re Soli*, 137 USPQ 797 (CCPA 1963).

Therefore, independent claims 1 and 17 are patentable over Kniess, as the inventions defined thereby are not suggested within Kniess, nor is there any suggestion or motivation to modify this reference's teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103. Accordingly, favorable consideration of claims 1 and 17 and their respective dependent claims 2-5, 25-27, 29, and 31, and claims 22, 28, 30, and 32 are respectfully requested.

The Examiner continues by asserting that Kniess teaches an adapter circuit that controls the direction of data traffic between a first and second station via [being] connected to a bi-directional bus that [uses] the differences of instantaneous source impedance that is changed between a low impedance and a high impedance. It would have been obvious to one of ordinary skill that the controlling of input and output data communication is without the presence of any additional signaling protocol that identifies a data input phase or a data output phase.

The Examiner further asserts that as per claims 6-9, 18, 19, Kniess does not clearly teach wherein a ratio of said high impedance to said low impedance is about or at least 1000:1, 500:1, or 100:1 or between 1000:1 and 10000:1, however, it would have been obvious to one of ordinary skill that the ratio of high/low impedance of

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Kniess' adapter could be modified to implement a host of other ratio, because doing so would ensure the practicality of Kniess' adapter when implemented in other systems.

The applicants assert the above mentioned requirements of MPEP 2143.03 that specifically states that, "to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art," which in this rejection relates to the ratio of said high impedance to said low impedance is about or at least 1000:1, 500:1, or 100:1 or between 1000:1 and 10000:1 in claims 6-9, 18, 19.

The Examiner further asserts that as per claims 39 and 44-47, Kniess teaches an adapter for controlling traffic data signals between a first and second device therefore, it would have been obvious to one of ordinary skill that the adapter would ensure data is routed to the proper destination.

The applicants assert that the Examiner has failed "to establish *prima facie* obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art," which in this rejection relates at least to the adapter that would ensure data is routed to the proper destination in claims 39 and 44-47.

The Examiner further asserts that as per claims 10-16, 20, 21, 23, 24, 40, and 41, Kniess disclosed in a prior art system the use of a microprocessor and a memory peripheral device and obvious control lines, (Fig. 2b) therefore it would have been obvious that Kniess' adapter could be implemented in other systems thereby expanding the flexibility of the adapter.

The applicants assert that the Examiner has failed "to establish *prima facie* obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art," which in this rejection relates at least to the adapter that could be implemented in other systems thereby expanding the flexibility of the adapter in claims 10-16, 20, 21, 23, 24, 40, and 41.

The Examiner concludes that as per claims 42, 48, and 49-52, Kniess does not teach a data signal and clock signal separation circuit for separation of data-out + clock and data-in at the peripheral device such that it can interface to a standard SPI device or a standard UART at the peripheral device, which is performed such that it can interface to devices which use Pulse Width Modulation to convey analog values. However, separation circuit and the use of Pulse Width Modulation to convey analog values are well known in the art, thereby making their use obvious to one of ordinary skill.

The applicants assert that the Examiner has failed "to establish *prima facie* obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art," which in this rejection relates at least to a data signal and clock signal separation circuit for separation of data-out + clock and data-in at the peripheral device such that it can interface to a standard SPI device or a standard UART at the peripheral device, which is performed such that it can interface to devices

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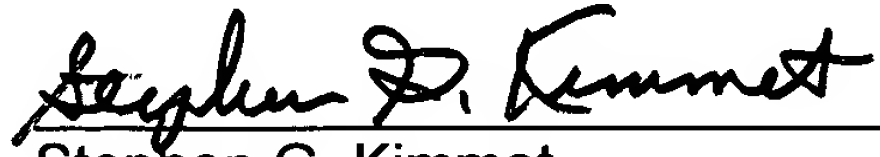
which use Pulse Width Modulation to convey the analog values in claims 42, 48, and 49-52.

Therefore, claims 6-16, 18-21, 23-24, and 39-52 are patentable over Kniess, as the inventions defined thereby are not suggested within Kniess nor is there any suggestion or motivation to modify this reference's teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103. Consequently, claims 6-16, 18-21, 23-24, and 39-52 should be allowed over Kniess. Accordingly, favorable reconsideration of claims 6-16, 18-21, 23-24, and 39-52 are respectfully requested.

CONCLUSION

If the Examiner has any remaining questions or concerns, or would prefer claim language different from that included herein, the favor of a telephone call to the applicants' attorneys/agent is requested.

Respectfully submitted,



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